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ABSTRACT

The process of awarding the grant for the National Center for Research in Vocational Education, as authorized by the Carl D. Perkins Vocational Education Act, began in November 1986 with the announcement of the grant competition and culminated on January 4, 1988, with the University of California at Berkeley being selected for the 5-year grant over Northern Arizona University and Ohio State University (where the National Center had been operating under a grant that expired on January 15, 1988). To stimulate competition, the Department of Education awarded planning grants to four institutions that had applied to enter the competition for the National Center (Berkeley, Ohio State, Northern Arizona University, and Virginia Polytechnic Institute and State University). The first three of these institution eventually completed the grant application process. Five field readers were selected by the acting assistant secretary to read and score applications on the basis of published evaluation criteria. Based on these evaluations, Ohio State received the top ranking, followed by Berkeley and Northern Arizona. About a month later, the field readers made site visits to the three applicant institutions. Ohio State and Northern Arizona provided tours of the facilities that would be used for the National Center, whereas Berkeley officials did not. Instead, they discussed their plans for the National Center facilities that would eventually be developed by subcontracting institutions. Afterward, the field readers revised their scores. This adjustment resulted in increases of 2.4, 13.2, and 9.2 points in the respective scores of Ohio State, Berkeley, and Northern Arizona. The assistant secretary then recommended that Berkeley receive the grant because it had the highest score. (MN)

GAO

January 1985

VOCATIONAL
EDUCATIONInformation on the
National Research
Center's Grant Award
Process

U. S. DEPARTMENT OF EDUCATION
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Human Resources Division

B-205028

January 29, 1988

The Honorable Howard M. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
United States Senate

The Honorable William F. Goodling
Ranking Minority Member
Subcommittee on Elementary, Secondary,
and Vocational Education
Committee on Education and Labor
House of Representatives

This report responds to your December 1987 requests that we review the Department of Education's recent grant award procedures used to select one of three competing universities as the National Center for Research in Vocational Education. In discussions with your offices, we agreed to (1) describe and analyze the process used to select the awardee and (2) examine issues related to the qualifications of nonfederal panelists (field readers) selected to evaluate grant applications, each applicant's proposed financial contribution toward the Center's establishment, whether the difference between the two top-ranked applicants' final scores was statistically significant, and several other aspects of the selection process.

The process to select the National Center, authorized by the Carl D. Perkins Vocational Education Act, began in November 1986 with the announcement of the grant competition and culminated on January 4, 1988, with the University of California at Berkeley being selected for the 5-year, \$30 million grant over Northern Arizona University and Ohio State University. (Ohio State formerly operated the National Center under a grant that expired on January 15, 1988.)

This report elaborates on information we gave to your offices and other interested congressional staff and Department of Education officials in January 4, 1988, briefings. Because of pending litigation, we offer no opinion regarding the legality of the grant process. Appendix I describes the award process used to select Berkeley, and appendix II discusses our objectives, scope, and methodology.

Background

The Carl D. Perkins Vocational Education Act (Public Law 98-524) stipulates that the National Center be associated with a public or private

nonprofit university that is prepared to make a substantial financial contribution to the center's establishment. The law also requires that the center have a director who is appointed by that university.

The National Center's primary purpose is to design and conduct research and developmental projects and programs. Activities may be conducted by the National Center itself or by institutions of higher education and other public agencies acting as subcontractors to it.

Five nonfederal field readers selected by the Department read and scored the three grant applications based on preestablished evaluation criteria of varied weights. During site visits to the three applicants, field readers, as permitted by Department procedures, adjusted their initial scores based on their observations and on discussions with institution officials that clarified concerns associated with the applications. The scores for each application were averaged and ranked. The assistant secretary for vocational and adult education then recommended funding the top-ranked application (Berkeley). Negotiations took place and Berkeley was subsequently selected as the grantee.

On January 8, 1988, Ohio State University filed suit against the Department of Education alleging violations of the statutes and regulations pertaining to the grant award process.

The Division of Innovation and Development in the Department of Education's Office of Vocational and Adult Education administers the National Center's grant program and oversees the grant competition every 5 years. Office procedures to implement each grant competition are contained in an Application Review Plan. During the recent grant award process, leadership of the Office of Vocational and Adult Education was under (1) an acting assistant secretary from October 1, 1985, to February 22, 1987; (2) a second acting assistant secretary from February 23 to June 19, 1987; and (3) an assistant secretary from June 20, 1987, to the present.

Institutions competing for the National Center grant were required by published program regulations (34 C.F.R. Part 417) to submit applications to the Secretary of Education. A panel of field readers read and scored applications that met grant eligibility criteria requiring applicants to be (1) prepared to make a substantial financial contribution toward the Center's establishment and (2) associated with a public or private nonprofit university.

In accordance with program regulations (34 C.F.R. 417.31), field readers scored each application on the basis of seven evaluation criteria of varied weights established by the Department: required functions covering services and activities (40 points), management (20 points), quality of key personnel (15 points), experience in and capacity for conducting research in vocational education (10 points), adequacy of resources (5 points), budget and cost effectiveness (5 points), and external relations with individuals at the national, state, and local levels (5 points). In addition, the Application Review Plan required site visits to the applicants. Such site visits were required so that field readers could further evaluate applications and subsequently revise scores if appropriate. The Department's Grants and Contracts Service standardized¹ the readers' raw scores and ranked the applications based on these standardized scores.

According to Department regulations (34 C.F.R. 75.217(d)), the secretary or designee who recommends an application for funding may consider (1) the information in each application; (2) the ranking of grant applications; and (3) any other information relevant to a criterion, priority, or other requirement that applies to the selection of applications for new grants. If negotiations with the applicant recommended for funding are successful, the applicant is formally selected as the grantee.

Selection of Field Readers

The Perkins Act requires field readers for the National Center grant competition to be recognized nationally as experts in vocational education administration and research. To gather information concerning this requirement, we (1) reviewed the Department's process for selecting field readers and (2) asked the heads of four national organizations related to vocational education, a national advisory council on vocational education appointed by the President, and the congressionally mandated National Assessment of Vocational Education if they were familiar with the backgrounds and experiences of the five readers. None of the individuals from these organizations had heard of or could attest to the qualifications of three of the five readers.

In a December 30, 1986, memorandum to the then acting assistant secretary for vocational and adult education, the director of the Division of

¹Standardization is a statistical procedure that minimizes the tendency of some readers to score applications consistently high or consistently low. However, in the case of the National Center's grant competition, standardizing the scores did not affect the final rankings.

Innovation and Development recommended as field readers 44 individuals who he stated were "experts recognized in the areas of vocational administration and research." The names were grouped under the headings "research," "state agency personnel," "community college personnel," and "other names." Each name was accompanied by a brief description of the individual's activities in vocational education, such as "strong in financing vocational education," "director of a research institute," or "knows practical problems in vocational education." The director also attached two additional lists for the acting assistant secretary's consideration, made up of (1) the five persons who had reviewed the National Center's continuation grant application in the previous year and (2) the five persons who were scheduled to review the National Center planning grant applications on January 12-16, 1987.

According to one of the staff members who developed the first list of 44 names, the Application Review Plan contained no written criteria for selecting "individuals recognized nationally as experts in vocational education administration and research." Criteria were never developed, he said, because it was felt to be difficult to further define this statutory requirement. In his opinion, "national experts" would likely be individuals known by various vocational associations, state organizations, and the Department for their contributions to vocational education. In addition, he said that staff interpreted the law to mean that a field reader should be a nationally recognized expert in either administration or research but that both disciplines should be represented on the panel.

The official said that in developing a list of potential field readers, he and the other staff member identified individuals they knew or had knowledge of in the field. According to him, they identified some names through his personal file of prominent individuals in vocational education or a newly established division file of potential field readers containing about 20 resumes.

In February 1987, the newly appointed acting assistant secretary for vocational and adult education selected five readers. Of the 5, 2 were from the suggested list of 44 names; 1 was from the list of readers who participated in the previous year's review of the National Center's application for continued funding; and 1 was from the list of readers who participated in the review of planning grant applications for the National Center. The fifth reader was not on the lists of potential readers developed by the program office and sent to the acting assistant secretary.

The 2 individuals selected from the list of 44 names had been listed under the heading "state agency personnel." One was described as an "experienced research coordinating unit director," and the other as an "experienced administrator of both secondary and post-secondary vocational education programs." These two individuals were also the ones whose names were recognized by at least some of the six vocational education organizations and two of the three representatives of the competing institutions (see p. 6).

In making his selections, the former acting assistant secretary considered the lists of names submitted to his predecessor. He said that the individual he selected, who was not on any of the lists, was a friend and former colleague whom he selected because of the person's experience in postsecondary education and vocational education research. The acting assistant secretary also stated that it was difficult selecting field readers because many qualified individuals had previous contact with Ohio State University's National Center for Research in Vocational Education.

Table 1: Vocational Education Organizations' Familiarity With Panelists

Organization	Panelist				
	1	2	3	4	5
American Association of Community and Junior Colleges	No	No	No	No	No
American Vocational Association	Yes	No	No	No	No
American Vocational Education Research Association	No	No	No	No	No
National Assessment of Vocational Education	Yes	Yes	No	No	No
National Association of State Directors of Vocational Education	Yes	Yes	No	No	No
National Council on Vocational Education	Yes	No	No	No	No

A "Yes" indicates that the organization was familiar with the panelist

Because the Department had no criteria to select "nationally recognized experts," we surveyed the heads of vocational education organizations to determine whether they had heard of or could attest to the qualifications of the panelists. According to the program official who assisted us in identifying these organizations, they are "key" vocational education related groups. As shown in table 1, four of the six organization heads we contacted indicated familiarity with one reader and two indicated familiarity with another.² None of the organization heads had heard of or could attest to the qualifications of the other three readers. We

²To ensure reader anonymity, panelist numbers in table 1 do not coincide with those in tables 1.2 and 1.3 in appendix I.

attempted to verify positive responses from the organization heads by requiring respondents to substantiate their answers with evidence of specific knowledge of the panelists' qualifications.

We obtained similar results from our telephone interviews with the proposed center directors for each of the three applicants. For example, the two readers whose backgrounds and experiences were familiar to one or more of the heads of the vocational education organizations were also familiar to two of the three officials representing the applicants. In addition, two of the three readers whose backgrounds and experiences were not recognized by any of the organization heads we contacted were also not recognized by any of the three applicants.

Department Consideration of Grant Eligibility Factors

The Perkins Act contains legal requirements that a grantee must meet to obtain the 5-year National Center grant. These requirements relate to a grantee's (1) preparing to make a substantial financial contribution toward the National Center's establishment, (2) being an organization associated with a public or private nonprofit institution, and (3) appointing a director for the National Center.

Regarding the issue of substantial financial contribution, Berkeley proposed a first year contribution of \$686,000 compared to \$1.6 million proposed by Ohio State University and \$2.1 million³ proposed by Northern Arizona University. The Application Review Plan contained no criteria to define what constitutes a substantial financial contribution, and the division, which screened grant applications, approved the eligibility of all three. Without such criteria, a program official who helped screen applications told us that it was agreed that the staff would use its professional judgment and experience in screening the applications. He said that although Berkeley's proposed contribution of \$686,000 was less than those of the other two applicants, the amount was considered "substantial" because it represented 10 percent of the \$6 million annual grant amount to be awarded.

The same official also told us that Berkeley's proposal to affiliate with other universities to provide grant services was acceptable under the law because it permits subcontracting with "other public agencies and public or private institutions of higher education." However, according

³According to a Department grants official, if Northern Arizona University had been recommended for funding, its proposed contribution would not have been allowed because it represented the value of real property rather than allowable expenses such as staff time and overhead rates.

to a grants official responsible for negotiating budgetary matters with recommended grant recipients, Berkeley initially also proposed to share fiscal responsibility with the other universities with which it proposed to affiliate. He noted that it was the Department's position that the applicant, regardless of its subcontracting or affiliation arrangements, must assume all fiscal responsibility for the grant. This was a major discussion point in the Department's grant negotiations with Berkeley, but was satisfactorily resolved when Berkeley agreed to be solely responsible for its contribution and consequently increased its proposed contribution from \$93,000 to \$603,000.

After eligibility was granted, the program official who served as chairman of the grant review panel expressed concern with Berkeley's proposal to have two codirectors. The Perkins Act provides that the "National Center shall have a Director." In response to his concern that Berkeley's proposal of two codirectors might be inconsistent with the act, he was instructed by the division director to inform field readers during the application review period in late August 1987 that (1) all applications were eligible for review and (2) the issue relating to Berkeley's directorship should not be considered in evaluating applications. On September 1, 1987, the division director sought a legal opinion on this matter from the Department's Office of General Counsel.

In late September, a Department attorney advised the program official by telephone that Berkeley's proposal of two codirectors was a "technical" matter, which did not affect grant eligibility. In accordance with the attorney's instructions, the program official advised field readers not to raise the issue of codirectors with Berkeley officials during the site visit. An October 22, 1987, Department legal opinion stated that:

"... it would be inappropriate to regard the proposing of co-directors in the application as affecting the overall eligibility of the applicant. This would be an overly strict reading of the statute; we could find no legislative history to support such a reading. Even if the statute were read to bar naming two co-directors, the applicant's proposal to use co-directors would constitute a technical deficiency, which could be rectified at a later time in the negotiation stage."

After grant negotiations, Berkeley agreed to name an executive director and an associate director.

Rank Order of Applicants Known Before Completion of Scoring Process

Before making site visits to the applicant institutions during which readers could revise initial scores for each applicant, four of the five field readers knew the rank order of the applications based on readers' assigned application scores. We found no evidence to suggest that the Department provided this information to influence the process or that field readers used this information to unfairly influence other readers to change their scores. However, withholding information on panelists' initial total scores could reduce the possibility of any panelist manipulating the scoring system by arbitrarily increasing his or her score to offset a lower score by another panelist.

According to the five readers and program and grants officials who attended the review session, each reader's scores for each application, by the seven criteria, as well as total scores, were recorded on a blackboard in the meeting room on the last day of the review period in August 1987. According to program officials, scores were displayed in this manner to give reviewers, who assigned the highest and lowest scores on each criterion, an opportunity to explain the perceived strengths and weaknesses of the applications, after which field readers could change their scores if they desired. The program official who chaired the field reader panel told us that no field reader changed his or her score at that time.

Four of the five field readers told us that, using the raw scores displayed, they were able to compute the rank order of the applications. Each of the four readers recalled that Ohio State was ranked first; Berkeley, second; and Northern Arizona, third. The other field reader stated that although total scores were displayed, he did not compute the rank order or otherwise learn of it.

Program and grants officials said that discussions of field readers' low and high scores are a routine part of application reviews. However, they acknowledged that most grant competitions have more applicants and more panels of readers, which would make it more difficult for readers to compute the overall rank order of applicants. They agreed that knowing the applicants' rank order before the completion of the review could have allowed the misuse of this information.

Statistical Significance of Difference in Final Scores

After our January 4, 1988, briefing, your offices asked us to determine if the difference in the final scores between Berkeley, the top-ranked applicant, and Ohio State, the second-ranked applicant, was statistically significant. In our opinion, such a determination can be made only if the readers who evaluate grant proposals are considered to be a sample of the universe of potential readers. Because there were only five panelists to review these proposals, we do not believe that such a test of these scores is appropriate considering the limited sample size. We estimate that about 30 to 60 readers would be needed to conclusively determine whether there is any statistically significant difference between the Berkeley and Ohio State scores.

As requested by your offices, we did not obtain written agency comments on a draft of this report. However, we discussed its contents with Department officials and incorporated their comments where appropriate. We also incorporated pertinent changes suggested in a January 26, 1988, letter from the assistant secretary for vocational and adult education to our office concerning issues discussed during our January 4 briefing. Because these matters pertained to our briefing rather than our written report, we did not include a copy of these comments in our final report.

Also, as requested by your offices, we plan no further distribution of this report until 7 days after issuance unless its contents are publicly announced earlier. At that time, we will send copies of this report to the Director, Office of Management and Budget; the Secretary of Education; the three grant applicants; and other interested congressional parties. Copies will be made available to others on request.



William J. Gainer
Associate Director

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National Research Center Grant Award Process

To stimulate competition, the Department provided planning grants in late February and early March 1987 to institutions interested in applying for the National Center grant. Under a competitive process initiated in August 1986, four institutions applied for and were ultimately awarded \$25,000 each to develop applications for the National Center grant competition. They were Berkeley, Northern Arizona University, Ohio State University, and Virginia Polytechnic Institute and State University.

On November 28, 1986, the Department published a notice in the Federal Register inviting grant applications for the National Center. Applications were due on August 14, 1987. Three of the four institutions that received planning grants submitted applications: Berkeley, Northern Arizona, and Ohio State.¹ There were no other applicants.

Upon receiving the applications, officials in the Division of Innovation and Development reviewed them and determined that all were eligible for the competition. According to eligibility criteria stated in published program regulations and the Office of Vocational and Adult Education's Application Review Plan, an applicant was considered eligible if it was (1) associated with a public university or private, nonprofit university and (2) prepared to make a substantial financial contribution toward the Center's establishment. The screening criteria in the regulations and the Application Review Plan did not contain reference to the legislative requirement that "a director" be designated.

The five field readers, selected by the acting assistant secretary, convened for 5 days in Washington, D.C., on August 24, 1987, to read and score applications. These readers scored the applications on the basis of published evaluation criteria. About a month later, from September 28 through October 1, 1987, the field readers made site visits to the three applicant institutions. These visits were made so that the readers could obtain more information about each applicant's grant application, facilities, and policies and subsequently revise scores if appropriate.

A September 4, 1987, letter to each applicant stated that appropriate activities for the site visit included formal presentations expanding, supplementing, or summarizing information in the application; tours of the proposed facilities for the National Center; and slide presentations or showing of blueprints of additional off-site facilities.

¹ Virginia Polytechnic Institute and State University was one of five proposed subcontracting institutions in Berkeley's grant application.

The Department's letter to the applicants also stated that "identical procedures will be followed for each of the site visits to the other applicants" and "the same agenda will also be followed at each site." The agenda, a copy of which was attached to each letter, specified 2 hours for a presentation and facilities review, 2-1/2 hours for a question-and-answer session, and 1-1/2 hours for panelists to write comments justifying any revised scores.

During their designated 2 hours for a presentation and facilities review, Ohio State and Northern Arizona provided tours of their proposed facilities for the National Center, while Berkeley did not. According to the Department program official who chaired the field reader panel and attended the site visits, Berkeley officials discussed their facilities to be used for the National Center during a 2-hour presentation and slide show of the campuses of its proposed subcontracting institutions. This official said the slides did not show the particular facilities to be used for the National Center.

According to program officials, there was a 1-month time lag between the application review period and the site visits to resolve logistical problems. In telephone interviews with field readers, all stated that during the month between the application review and site visits, they did not receive any new information about the applicants or the applications.

In accordance with the Application Review Plan, field readers were allowed, after each site visit, to adjust any scores previously given during the application review on the basis of information obtained from the visit. Table I.1 shows the extent to which overall average scores changed as a result of the site visits. Tables I.2 and I.3 show the extent to which readers adjusted their scores for the two top-ranked proposals.

Table I.1: Field Readers' Scoring
Adjustments

Applicant	Average scores before site visits	Average scores after site visits	Total adjustments
Ohio State	81.2	83.6	+ 2.4
Berkeley	73.6	86.8	+13.2
Northern Arizona	56.6	65.8	+ 9.2

As shown in table I.1, at the end of the panel meeting in Washington, D.C., Ohio State's average raw score was 7.6 points higher than Berkeley's, but after readers adjusted their scores during the site visits, Berkeley's average raw score was 3.2 points higher than Ohio State's.

Table I.2: Panelists' Raw Scores Before and After Site Visit—Berkeley

Criteria	Maximum points	Panelist				
		1	2	3	4	5
Required functions	40	25/32	30/35	28/30	34/38	34/36
Management	20	13/17	10/16	14/16	12/18	10/16
Personnel	15	12/14	10/12	10/12	10/15	14/14
Vocational education experience	10	9/9	7/8	8/8	10/10	10/10
Resources	5	5/5	5/5	4/5	2/5	5/5
Budget	5	5/5	5/5	3/3	5/5	3/4
External relations	5	4/4	3/5	3/3	4/5	2/4
Total	100	73/86	70/86	70/77	77/96	78/89

Table I.3: Panelists' Raw Scores Before and After Site Visit—Ohio State University

Criteria	Maximum points	Panelist				
		1	2	3	4	5
Required functions	40	36/36	26/26	30/33	36/36	35/35
Management	20	17/17	13/17	16/17	17/17	16/18
Personnel	15	11/11	5/5	11/13	13/13	12/10
Vocational education experience	10	10/10	6/6	10/10	10/10	9/9
Resources	5	5/5	5/5	5/5	5/5	5/5
Budget	5	5/5	5/5	3/3	5/5	5/5
External relations	5	4/4	2/4	4/4	5/5	4/4
Total	100	88/88	62/68	79/85	91/91	86/86

The Department's Grants and Contracts Service standardized the readers' raw scores and ranked the applications based on the standardized scores. Applicants' final rankings were provided to the assistant secretary on October 14, 1987. Later that day, she recommended the funding of Berkeley, the top-ranked applicant, based on the final rankings and the program staff's recommendation.

The assistant secretary said that she recommended funding Berkeley to the Grants and Contracts Service on the basis of its relative ranking

with other institutions and did not realize other factors could be considered. Federal regulations do state, however, that the assistant secretary may also consider the following in making grant award selections:

- The information in each application.
- Any other information relevant to a criterion, priority, or other requirement that applies to the selection of applications for new grants.

The assistant secretary told us that based on separate discussions she had with program and grants office staff regarding her responsibilities in the award selection process, she believed it was the normal procedure to recommend that the top-ranked application be funded regardless of the point difference. She said that she did not read any of the applications before making her decision. In fact, she believed if she had considered factors other than application scores in making her decision, she would have been criticized for having a conflict of interest because she had received a doctorate in education from Berkeley in 1985. In later discussions, Department officials told us that selections of applicants that deviate from the rank order must be justified in writing and are rarely made. They said such deviations occur primarily in cases where there is a compelling reason not to fund a top-ranked applicant; for example, if a top-ranked applicant had previously demonstrated inadequate grant performance.

After the assistant secretary's decision, program officials and officials of the Department's Grants and Contracts Service conducted negotiations with Berkeley. During the negotiations, technical and budgetary issues of Berkeley's grant application were resolved. Negotiations were concluded on December 18, 1987, and the Department formally awarded the grant to Berkeley on January 4, 1988. We were told that if negotiations with Berkeley had been unsuccessful, the second-ranked applicant would have been recommended for funding.

Objectives, Scope, and Methodology

In a December 1, 1987, letter from the Chairman, Subcommittee on Labor, Senate Committee on Labor and Human Resources, and a December 2, 1987, letter from the Ranking Minority Member, Subcommittee on Elementary, Secondary, and Vocational Education, House Committee on Education and Labor, we were asked to review the Department of Education's recent grant award process for the National Center for Research in Vocational Education. In discussions with the requesters' offices, we agreed to analyze and describe the grant award process and examine, among other things, (1) the field reader selection process; (2) each applicant's proposed financial contribution toward the establishment of a National Center; and (3) the statistical significance, if any, of differences in final scores between the two top-ranked applicants. As agreed, we did not evaluate the substance of the grant applications or the field readers' written comments on them.

We reviewed applicable legislation and regulations; the Office of Vocational and Adult Education's approved Application Review Plan, which specified procedures for conducting the National Center's grant competition; and other Department documentation related to the grant competition. We also interviewed Department officials, including the assistant secretary for vocational and adult education, program officials, and officials in the Grants and Contracts Service.

To obtain information on the grant award process, we conducted structured telephone discussions with the five field readers. In addition, we contacted the heads of six vocational education organizations to determine the extent to which they had heard of or could attest to the qualifications of the readers. These organizations were: the American Vocational Association, the American Vocational Education Research Association (an arm of the American Vocational Association), the National Assessment of Vocational Education (a congressionally mandated study group located in the Department of Education), the National Association of State Directors of Vocational Education, the National Council on Vocational Education (a national advisory council appointed by the president), and the American Association of Community and Junior Colleges. According to the program official who assisted us in identifying these organizations, they are "key" vocational education related groups. We also talked with officials representing each of the three applicants to obtain information on site visits and discuss field readers' qualifications.

As directed by the requesters' offices, we did not obtain official agency comments on this report. However, we discussed its contents with

Appendix II
Objectives, Scope, and Methodology

Department officials and incorporated their comments where appropriate. Our audit work was conducted during December 1987. Our review was conducted in accordance with generally accepted government auditing standards.

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